

## LAMPIRAN A

### HASIL UJI MUTU FISIK GRANUL

Mutu fisik Yang diuji	Rep lika si	Formula Tablet Sublingual Propranolol HCl				Persyaratan
		FA	FB	FC	FD	
Waktu alir (detik)	I	7,36	7,66	2,59	2,94	Tidak lebih dari 10 detik (Banker & Anderson, 1996)
	II	8,85	8,92	3,88	3,91	
	III	8,96	6,70	2,78	3,14	
	$\bar{X}$	8,39	7,76	3,08	3,33	
	SD	0,89	1,11	0,70	0,51	
Sudut Diam (derajat)	I	40,02	39,69	38,66	39,69	25-40 Baik (Wells, 1988)
	II	40,22	39,62	38,06	39,67	
	III	39,56	39,49	38,71	38,78	
	$\bar{X}$	39,93	39,60	38,48	39,38	
	SD	0,34	0,10	0,36	0,52	
Ideks Kompresibili tas (persen)	I	19	18	15	20	18-21% dapat mengalir (Wells, 1988)
	II	20	19	14	20	
	III	20	18	14	20	
	$\bar{X}$	19,67	18,33	14,33	20	
	SD	0,578	0,58	0,578	0	

## LAMPIRAN B

### HASIL UJI KESERAGAMAN KANDUNGAN TABLET SUBLINGUAL PROPRANOLOL HCI

Hasil Uji Keragaman Kandungan Tablet Formula A *Batch* I

Abs	C sampel	W sampel	C teoritis	Kadar (persen)
0,387	15,91	362,5	17,19	92,54
0,382	15,65	360,1	16,93	92,41
0,375	15,28	356,8	16,63	91,90
0,371	15,07	356,3	16,58	90,87
0,388	15,96	363,1	17,22	92,68
0,380	15,54	360,4	16,96	91,58
0,378	15,44	358,9	16,83	91,76
0,378	15,44	357,3	16,67	92,62
0,372	15,12	355,4	16,50	91,63
0,370	15,01	350,9	16,08	93,34
			X	92,13
			SD	0,71
			KV	0,77

Hasil Uji Keragaman Kandungan Tablet Formula A *Batch* II

Abs	C sampel	W sampel	C teoritis	Kadar (persen)
0,360	14,48	343,3	15,39	94,09
0,371	15,07	350,5	16,04	93,94
0,372	15,12	352,3	16,22	93,24
0,371	15,07	350,1	16,00	94,16
0,391	16,12	361,1	17,03	94,64
0,382	15,65	359,2	16,89	92,26
0,378	15,44	358,1	16,75	92,22
0,362	14,59	349,8	15,98	91,28
0,360	14,48	343,3	15,39	94,09
0,363	14,64	348,5	1,86	92,30
			X	93,22
			SD	1,13
			KV	1,21

Hasil Uji Keragaman Kandungan Tablet Formula A *Batch* III

<b>Abs</b>	<b>C sampel</b>	<b>W sampel</b>	<b>C teoritis</b>	<b>Kadar (persen)</b>
0,374	15,22	350,1	16,00	95,10
0,375	15,28	351,2	16,11	94,88
0,368	14,91	345,9	15,62	95,43
0,375	15,28	358,2	16,75	91,20
0,372	15,12	355,5	16,51	91,61
0,377	15,38	356,3	16,58	92,27
0,366	14,80	347,8	15,87	93,26
0,370	15,01	347,2	15,74	95,34
0,368	14,91	352,0	16,18	92,14
0,371	15,07	352,4	16,22	92,91
			X	93,41
			SD	1,64
			KV	1,75

Hasil Uji Keragaman Kandungan Tablet Formula B *Batch* I

<b>Abs</b>	<b>C sampel</b>	<b>W sampel</b>	<b>C teoritis</b>	<b>Kadar (persen)</b>
0,367	14,85	347,2	15,74	94,33
0,392	16,18	364,7	17,37	93,15
0,390	16,07	360,1	16,93	94,89
0,392	16,18	364,1	17,31	93,47
0,366	14,80	347,3	15,76	93,92
0,381	15,59	350,5	16,04	97,18
0,380	15,54	350,2	16,00	97,07
0,385	15,81	351,1	16,10	98,20
0,392	16,18	364,7	17,37	93,15
0,395	16,33	362,9	17,20	94,93
			X	95,03
			SD	1,83
			KV	1,92

Hasil Uji Keragaman Kandungan Tablet Formula B *Batch* II

<b>Abs</b>	<b>C sampel</b>	<b>W sampel</b>	<b>C teoritis</b>	<b>Kadar (persen)</b>
0,392	16,18	364,7	17,37	93,15
0,394	16,28	365,0	17,41	93,35
0,390	16,07	365,2	17,40	92,28
0,391	16,12	360,8	17,00	94,83
0,388	15,96	350,2	16,10	99,69
0,389	16,02	352,8	16,26	98,53
0,380	15,54	348,9	15,90	97,74
0,392	16,18	358,7	16,81	96,63
0,393	16,23	360,1	16,93	95,84
0,388	15,96	355,4	16,50	96,72
			X	95,88
			SD	2,45
			KV	2,56

Hasil Uji Keragaman Kandungan Tablet Formula B *Batch* III

<b>Abs</b>	<b>C sampel</b>	<b>W sampel</b>	<b>C teoritis</b>	<b>Kadar (persen)</b>
0,377	15,38	355,6	16,52	93,10
0,372	15,12	352,2	16,20	93,33
0,380	15,54	361,0	17,02	91,31
0,381	15,59	363,5	17,26	90,32
0,379	15,49	358,2	16,75	92,46
0,370	15,01	350,1	16,00	93,79
0,378	15,44	355,6	16,52	93,46
0,382	15,65	362,9	17,20	90,98
0,381	15,59	361,3	17,05	91,42
0,370	15,01	360,5	16,97	88,43
			X	91,86
			SD	1,69
			KV	1,84

Hasil Uji Keragaman Kandungan Tablet Formula C *Batch* I

<b>Abs</b>	<b>C sampel</b>	<b>W sampel</b>	<b>C teoritis</b>	<b>Kadar (persen)</b>
0,358	14,38	349,7	15,89	90,52
0,356	14,27	346,2	15,66	91,13
0,356	14,27	346,5	15,68	91,00
0,359	14,43	348,0	15,82	91,22
0,360	14,48	352,1	16,20	89,4
0,367	14,85	358,2	16,75	88,64
0,366	14,80	355,0	16,46	89,90
0,362	14,59	351,9	16,18	90,19
0,360	14,48	350,7	16,06	90,15
0,372	15,12	358,2	16,75	90,25
			X	90,24
			SD	0,80
			KV	0,90

Hasil Uji Keragaman Kandungan Tablet Formula C *Batch* II

<b>Abs</b>	<b>C sampel</b>	<b>W sampel</b>	<b>C teoritis</b>	<b>Kadar (persen)</b>
0,355	14,22	346,6	15,69	90,65
0,357	14,33	348,0	15,82	90,59
0,350	13,96	346,5	15,68	89,02
0,369	14,96	358,1	16,75	89,32
0,361	14,54	350,2	16,00	90,82
0,365	14,75	350,5	16,04	91,94
0,366	14,80	361,7	17,08	86,64
0,355	14,22	347,5	15,78	90,13
0,357	14,33	348,0	15,82	90,59
0,354	14,17	346,6	15,69	90,33
			X	90,00
			SD	1,43
			KV	1,59

Hasil Uji Keragaman Kandungan Tablet Formula C *Batch* III

Abs	C sampel	W sampel	C teoritis	Kadar (persen)
0,348	13,85	345,9	15,62	88,64
0,350	13,96	348,0	15,82	88,25
0,350	13,96	348,2	15,84	88,14
0,359	14,43	355,8	16,50	87,25
0,352	14,06	350,0	16,00	87,88
0,351	14,01	351,2	16,11	86,93
0,349	13,90	347,1	15,74	88,32
0,362	14,59	360,0	16,93	86,18
0,350	13,96	348,2	15,84	88,14
0,352	14,06	351,2	16,11	87,30
			X	87,70
			SD	0,76
			KV	0,87

Hasil Uji Keragaman Kandungan Tablet Formula D *Batch* I

Abs	C sampel	W sampel	C teoritis	Kadar (persen)
0,384	15,75	359,2	16,85	93,46
0,380	15,54	352,0	16,18	96,03
0,381	15,59	355,4	16,50	94,48
0,380	15,54	352,4	16,22	95,80
0,391	16,12	361,2	17,04	94,61
0,390	16,07	360,4	16,97	94,70
0,378	15,44	348,2	15,84	97,49
0,379	15,49	349,0	15,90	97,39
0,395	16,33	364,7	17,37	94,01
0,381	15,59	354,2	16,38	95,15
			X	95,31
			SD	1,36
			KV	1,42

Hasil Uji Keragaman Kandungan Tablet Formula D *Batch* II

<b>Abs</b>	<b>C sampel</b>	<b>W sampel</b>	<b>C teoritis</b>	<b>Kadar (persen)</b>
0,384	15,75	354,8	16,44	95,79
0,385	15,81	355,0	16,46	96,04
0,384	15,75	354,2	16,38	96,13
0,378	15,44	348,1	15,82	97,58
0,392	16,18	360,2	16,95	95,46
0,394	16,28	362,0	17,12	95,11
0,388	15,96	359,1	16,85	94,74
0,388	15,96	359,7	16,90	94,46
0,384	15,75	354,2	16,38	96,13
0,383	15,70	349,8	15,98	98,24
			X	95,97
			SD	1,18
			KV	1,23

Hasil Uji Keragaman Kandungan Tablet Formula D *Batch* III

<b>Abs</b>	<b>C sampel</b>	<b>W sampel</b>	<b>C teoritis</b>	<b>Kadar (persen)</b>
0,385	15,81	355,5	16,51	95,79
0,385	15,81	355,8	16,54	95,59
0,388	15,96	359,0	16,83	94,82
0,379	15,49	348,9	15,90	97,42
0,395	16,33	362,3	17,14	95,26
0,393	16,23	360,1	16,93	95,84
0,396	16,39	366,2	17,51	93,58
0,384	15,75	354,7	16,43	95,87
0,388	15,96	359,0	16,83	94,82
0,384	15,75	354,7	16,43	95,87
			X	95,49
			SD	0,99
			KV	1,04

**LAMPIRAN C**  
**HASIL UJI KEKERASAN TABLET SUBLINGUAL**  
**PROPRANOLOL HCl**

*BATCH I*

No	Kekerasan Tablet Sublingual Propranolol HCl (kp)			
	FA	FB	FC	FD
1	5,5	4,6	6,5	6,4
2	5,4	4,6	6,5	6,2
3	5,5	4,4	6,5	6,6
4	5,5	4,4	6,5	6,4
5	5,7	4,5	6,4	6,3
6	5,5	4,4	7,1	6,2
7	5,4	4,4	6,4	6,6
8	5,4	4,4	6,8	6,1
9	5,4	4,4	6,5	6,2
10	5,6	4,4	6,5	6,2
$\bar{X} \pm SD$	$5,49 \pm 0,10$	$4,45 \pm 0,08$	$6,57 \pm 0,22$	$6,32 \pm 0,18$
SD rel (%)	1,81	1,91	3,29	2,77

*BATCH II*

No	Kekerasan Tablet Sublingual Propranolol HCl (kp)			
	FA	FB	FC	FD
1	5,3	4,6	6,4	6,0
2	5,3	4,4	6,5	6,0
3	5,6	4,4	6,2	6,2
4	5,3	4,4	6,4	6,1
5	5,5	4,2	6,5	6,0
6	5,3	4,4	6,4	6,0
7	5,6	4,5	6,4	6,1
8	5,3	4,4	6,4	6,0
9	5,5	4,4	6,5	6,2
10	5,3	4,5	6,4	6,1
$\bar{X} \pm SD$	$5,40 \pm 0,13$	$4,42 \pm 0,10$	$6,41 \pm 0,09$	$6,07 \pm 0,08$
SD rel (%)	2,47	2,34	1,37	1,36



BATCH III

No	Kekerasan Tablet Sublingual Propranolol HCl (kp)			
	FA	FB	FC	FD
1	5,2	4,5	6,6	6,1
2	5,3	4,5	6,6	6,3
3	5,2	4,7	6,5	6,1
4	5,2	4,5	6,6	6,1
5	5,4	4,7	6,6	6,1
6	5,4	4,5	6,6	6,2
7	5,1	4,5	6,6	6,3
8	5,4	4,7	7,1	5,9
9	5,3	4,6	6,7	6,3
10	5,2	4,6	6,6	6,3
$\bar{X} \pm SD$	$5,27 \pm 0,11$	$4,58 \pm 0,09$	$6,65 \pm 0,16$	$6,17 \pm 0,13$
SD rel (%)	2,01	2,01	2,48	2,17

**LAMPIRAN D**  
**HASIL UJI KERAPUHAN TABLET SUBLINGUAL**  
**PROPRANOLOL HCI**

<b>Formula</b>	<b>Replikasi</b>	<b>Berat awal (gram)</b>	<b>Berat akhir (gram)</b>	<b>Kerapuhan (%)</b>	$\bar{X}$ SD	$\pm$	<b>SD rel (%)</b>
A	1	6,96	6,94	0,29	0,25		30,43
	2	6,95	6,93	0,29	$\pm$		
	3	6,38	6,37	0,16	0,08		
B	1	6,98	6,96	0,29	0,30		5,77
	2	6,90	6,88	0,29	$\pm$		
	3	6,35	6,33	0,32	0,02		
C	1	6,77	6,76	0,15	0,15		3,77
	2	6,88	6,87	0,15	$\pm$		
	3	6,44	6,43	0,16	0,01		
D	1	6,35	6,33	0,32	0,31		3,23
	2	6,63	6,61	0,30	$\pm$		
	3	6,55	6,53	0,31	0,01		

**LAMPIRAN E**  
**HASIL UJI WAKTU HANCUR TABLET SUBLINGUAL**  
**PROPRANOLOL HCI**

Replikasi	Waktu Hancur (menit)			
	FA	FB	FC	FD
1	4	2	6	7
2	4	3	6	6
3	2	2	5	5
$\bar{X} \pm SD$	$3,33 \pm 1,15$	$2,33 \pm 0,58$	$5,67 \pm 0,58$	$6,00 \pm 1,00$

**LAMPIRAN F**  
**HASIL PENETAPAN KADAR TABLET SUBLINGUAL**  
**PROPRANOLOL HCl**

*BATCH I*

Formula	Repli kasi	Absor bansi	Csampil (µg/ml)	Cteorititis (µg/ml)	Kadar (%)	$\bar{X} \pm SD$	SD rel (%)
A	1	0,375	15,28	356,8	16,63	91,80	0,96
	2	0,378	15,44	357,3	16,67	±	
	3	0,371	15,07	356,3	16,58	0,88	
B	1	0,395	16,33	362,9	17,20	93,85	1,01
	2	0,392	16,18	364,7	17,37	±	
	3	0,392	16,18	364,1	17,31	0,95	
C	1	0,367	14,85	358,2	16,75	91,12	0,12
	2	0,366	14,80	355,0	16,46	±	
	3	0,360	14,48	350,7	16,06	0,11	
D	1	0,380	15,54	352,0	16,18	96,97	0,84
	2	0,379	15,49	349,0	15,90	±	
	3	0,378	15,44	348,2	15,84	0,82	

*BATCH II*

Formula	Repli kasi	Absor bansi	Csampil (µg/ml)	Cteorititis (µg/ml)	Kadar (%)	$\bar{X} \pm SD$	SD rel (%)
A	1	0,391	16,12	361,1	17,03	94,30	0,32
	2	0,360	14,48	343,3	15,39	±	
	3	0,371	15,07	350,1	16,00	0,30	
B	1	0,389	16,02	352,8	16,26	97,03	2,01
	2	0,380	15,54	348,9	15,90	±	
	3	0,391	16,12	360,8	17,00	1,95	
C	1	0,350	13,96	346,5	15,68	91,03	0,91
	2	0,354	14,17	346,6	15,69	±	
	3	0,365	14,75	350,5	16,04	0,83	
D	1	0,378	15,44	348,1	15,82	97,32	1,11
	2	0,384	15,75	354,2	16,38	±	
	3	0,383	15,70	349,8	15,98	1,08	

BATCH III

Formula	Repli kasi	Absorbansi	Csampil ( $\mu\text{g/ml}$ )	Cteoritis ( $\mu\text{g/ml}$ )	Kadar (%)	$\bar{X} \pm \text{SD}$	SD rel (%)
A	1	0,375	15,28	351,2	16,11	95,22	0,31
	2	0,368	14,91	345,9	15,62	$\pm$	
	3	0,370	15,01	347,2	15,74	0,30	
B	1	0,379	15,49	358,2	16,75	91,58	0,85
	2	0,380	15,54	361,0	17,02	$\pm$	
	3	0,382	15,65	362,9	17,20	0,78	
C	1	0,348	13,85	345,9	15,62	88,40	0,24
	2	0,349	13,90	347,1	15,74	$\pm$	
	3	0,350	13,96	348,0	15,82	0,21	
D	1	0,379	15,49	348,9	15,90	96,29	1,02
	2	0,384	15,75	354,7	16,43	$\pm$	
	3	0,385	15,81	355,8	16,54	0,99	

**LAMPIRAN G**  
**HASIL UJI DISOLUSI TABLET SUBLINGUAL PROPRANOLOL**  
**HCl**

**FORMULA A**

<b>t</b>	<b>A</b>	<b>C sampel</b>	<b>FP</b>	<b>C sesungguhnya</b>	<b>Wt</b>	<b>% obat terlarut</b>
15	1,1124	37,54	2	37,54	75,08	93,85
	1,1222	38,03	2	38,03	76,05	95,06
	1,1071	37,28	2	37,28	74,56	93,20
$\bar{X} \pm SD$						94,04 $\pm$ 0,94

**FORMULA B**

<b>t</b>	<b>A</b>	<b>C sampel</b>	<b>FP</b>	<b>C sesungguhnya</b>	<b>Wt</b>	<b>% obat terlarut</b>
15	1,1329	38,55	2	38,55	77,11	96,38
	1,1423	39,02	2	39,02	78,04	97,54
	1,1462	40,05	2	40,05	80,11	100,14
$\bar{X} \pm SD$						98,02 $\pm$ 1,93

**FORMULA C**

<b>t</b>	<b>A</b>	<b>C sampel</b>	<b>FP</b>	<b>C sesungguhnya</b>	<b>Wt</b>	<b>% obat terlarut</b>
15	1,0212	33,04	2	33,04	66,08	82,60
	1,0331	33,63	2	33,63	67,25	84,06
	1,0735	35,62	2	35,62	71,24	89,05
$\bar{X} \pm SD$						85,24 $\pm$ 3,38

### FORMULA D

t	A	C sampel	FP	C sesungguhnya	Wt	% obat terlarut
15	1,1387	38,84	2	38,84	77,68	97,10
	1,1394	38,87	2	38,87	77,75	97,19
	1,1467	39,24	2	39,24	78,47	98,09
$\bar{X} \pm SD$						97,46 $\pm$ 0,55

## LAMPIRAN H CONTOH PERHITUNGAN

### Contoh perhitungan sudut diam:

Formula A:

$$W \text{ persegi panjang} = 5,11 \text{ gram}$$

$$W \text{ lingkaran} = 0,76 \text{ gram}$$

$$\text{Luas persegi panjang} = 707,35 \text{ cm}^2$$

$$\text{Luas lingkaran} = \frac{0,76}{5,11} \times 707,35 = 105,20 \text{ cm}^2$$

$$L = \pi \cdot r^2$$

$$r^2 = \frac{L}{\pi}$$

$$= \frac{105,20}{3,1}$$

$$r = 5,79 \text{ cm}$$

$$\text{tg } \alpha = \frac{t}{r} = \frac{4,78}{5,79}$$

$$= 39,54^\circ$$

### Contoh perhitungan indeks kompresibilitas:

Formula A :

$$\text{Berat gelas} = 119,21 \text{ g } (W_1)$$

$$\text{Berat gelas + granul} = 178,89 \text{ g } (W_2)$$

$$V_1 = 100 \text{ ml}$$

$$V_2 = 85 \text{ m}$$

$$\text{Bj nyata} = \frac{(W_2 - W_1)}{V_1} = \frac{(178,89 - 119,21)}{100} = 0,5968$$



$$B_j \text{ mampat} = \frac{(W_2 - W_1)}{V_2} = \frac{(178,89 - 119,21)}{80} = 0,7460$$

$$\% \text{ kompresibilitas} = \left( 1 - \frac{B_j \text{ nyata}}{B_j \text{ mampat}} \right) \times 100\% = 20,0\%$$

### Contoh perhitungan akurasi dan presisi

%	Bahan Aktif (mg)	Xanthan Gum (mg)	Avicel pH 101 (mg)	Matrik (mg)	Aquade st	Pipet (ml)	Aquade st	Kons
100	40	15,5	248	46,5	50	0,2	10	16,34

Absorbansi = 0,383 →  $y = 0,0189x + 0,0859$

Konsentrasi sebenarnya = 15,7 ppm

Konsentrasi teoritis = 16,34 ppm

% perolehan kembali = (konsentrasi sebenarnya / konsentrasi teoritis) x 100%

$$= \left( \frac{15,7}{16,34} \right) \times 100\% = 96,08\%$$

Untuk menghitung % KV

$$= \frac{SD}{\bar{X}} \times 100\% = \frac{0,4898}{96,80} \times 100\% = 0,5060\%$$

# LAMPIRAN I

## Sertifikat Analisis Propranolol HCl



**Plant Jakarta**  
 Jagelam V No.1 Kawasan Industri Pulogadung  
 Jakarta Timur 13930  
 Telp. +62 21 4609354, 4603144 Fax. +62 21 4603143  
 e-mail : dpj@cbn.net.id

No.Pemeriksaan : 80977/BB/08/02  
 Tgl.Permohonan : 14 Mei 2010  
 Tgl.Pemeriksaan : 03 Juni 2010  
 C.A : Ada

**07 JUN 2010**

Periksa laporan HPL No : 80977/BB/08 - 01

### HASIL PEMERIKSAAN BAHAN BAKU

NAMA BAHAN BAKU : **PROPRANOLOL HCl ( 1000302 )**  
**PROPRANOLOL HCl**  
 MEREK/PRODUSEN : Societa Italiana Medicine Scandicci Italy  
 JUMI KEMASAN : 7 drum @ 25 kg = 175 kg  
 JUMLOH CONTOH : 4 x 10 g ( 1 - 4 )

TGL.PEMBUATAN : Mei 2008  
 DALUARSA : Mei 2013  
 PEMASOK : PT.Menjangan Sakti  
 No.BATCH : 28.051

Pemeriksaan	Hasil	Syarat	Metode
Pemerian	1 - 4 = Serbuk kristal halus berwarna putih	Serbuk berwarna putih atau hampir putih	BP. 2003
Identifikasi	1 - 4 = Benar	-	BP. 2003
Kejernihan dan warna larutan(2 gram dalam 20 ml Methanol)	Memenuhi Pengujian	-	MPK0007
Susut pengeringan (10 <sup>o</sup> konstan)	0,01%	Max,0,5 %	BP. 2003
Kadar	99,74%	-	BP. 2003
Kadar terhadap zat kering	99,75%	99,0 % - 101,0 %	BP. 2003

Kesimpulan : **DILULUSKAN/DIOLAK** Putri  
 Catatan : **Bagian Pergudangan**  
 Diperiksa ulang  
 Tgl.

Apoteker Penanggung Jawab PM

Jakarta,  
 Asman Pengawasan Mutu

**Dra. Tri Mutianingsih**

**Drs. Hadi Kardoko**

Y:\zadepolok\laba\laba\DATA\MANAGER\PMIC\2010\UNIVERSITAS SURABAYA\BB.doc

Jl. Rawagelam V No. 1  
 Kawasan Industri Pulogadung  
 Jakarta Timur 13930  
 Telp. 4609354 (Hunting), 4603144  
 Fax. 4603143

# Sertifikat Analisis Xanthan Gum

## S Satiaxane™ CX 800 80 mesh xanthan gum

### PROPERTIES

#### DISPERSION

To disperse the product without lumps:

- premix the powder with the other dry ingredients,
- or, disperse it in a non-solvent medium (oil, alcohol), and pour the preparation into the liquid whilst stirring. Continue stirring to obtain a complete dispersion.

#### DISSOLUTION

The dissolution of the product depends on the medium and the process: it is improved by heat-treatment (time, temperature), shearsstress (propeller, exchanger, homogenizer).

A complete dissolution can be obtained in cold conditions.

#### Media / Uses

The product can be used in aqueous, dairy, or fruit media, with various total solids contents.

The maximum dosage is about 1.5 %, according to the medium and the required final texture.

### DESCRIPTION

**Satiaxane™ CX 800** is a food Additive used as a texturant. It is a cold soluble thickener which providing high viscosity and pseudo-plasticity at low concentration. Its solution shows very high resistance to acid and heat treatment as well as excellent salt tolerance and a exceptional suspension properties. With their unique rheological properties, Satiaxane™ CX 800 is well suited to the manufacture of food, pharmaceutical and cosmetic products.

Xanthan gum Satiaxane™ CX 800 conforms to the definition and specifications from JECFA (FAO/WHO), FDA (21 CFR) and European Community Directive 95/77/EC as amended). However, we recommend that the user ensures that this product is in compliance with the local regulations in force, particularly in the country where the product is to be consumed.

The product consists of:

• XANTHAN GUM

E 415

### CHARACTERISTICS

Rheology: Viscosity in a 1 % aqueous solution (+ 1 % KCl): 1200-1700 cps

pH: 6.0 to 8.0 - measured in a 1 % aqueous solution

Aspect, Flavour: White to cream colored powder, of neutral odour and flavour.

Particle size: 95 % less than 80 mesh (ASTM SCREEN 75µm)

Loss on drying: Not more than 14 %.

Bacteriological: Total plate count : Not more than 2000 CFU/gram  
Yeasts and Molds : Not more than 200 CFU/gram  
Pathogenic bacteria (E. coli in 5 grams, Salmonella in 10 grams) : Negative by tests

### PACKAGING AND STORAGE

25 Kg net cartons lined with a polyethylene bag. Store away from heat and moisture. The product, when stored in the previously mentioned conditions and in its original unopened packaging, will maintain its initial properties for at least 2 years.

M - FN 3724 - 14/12/08 - 01

UNIVERSITAS KATOLIK WIDYA MANDALAYA  
SURABAYA

# Sertifikat Analisis Avicel pH 101

TOTAL P. 02

2702 / 130 / XI / 10



## VIVAPUR® Type 101, Microcrystalline Cellulose NF, Ph. Eur., JP CERTIFICATE OF ANALYSIS

Batch No.: 0810104830  
 Re-evaluation date: July 2014  
 Manufacturing date: July 2010  
 Manufacturing Site: Weissenborn, Germany

Description			
Appearance	White or almost white fine or granular powder.		
Solubility	Practically insoluble in water, acetone, anhydrous ethanol and toluene, dilute acids and sodium hydroxide solution (50 g / L).		
Standards	Specification	Batch result	Reference
Bulk density	0.28 - 0.31 g / mL	0.29 g / mL	NF, JP T220F (MCW)
Particle size			
(retained on air jet sieve)	> 250 µm (60 mesh) max. 1 %	< 1 %	
	> 75 µm (200 mesh) max. 30 %	25 %	
	> 32 µm (489 mesh) min. 90 %	89 %	
Particle size distribution (Laser diffraction)			T220F (MCW)
	d10: 15 - 30 µm	20 µm	
	d50: 45 - 80 µm	71 µm	
	d90: 100-170 µm	181 µm	
Pharmacopial test items	Specification	Batch result	Reference
Zinc chloride test (Ident. A (1))	passes	passes*	Ph. Eur., NF, JP
Suspension test (Ident. 2)	passes	passes*	JP
Degree of polymerisation (Ident. B (3))	max. 350	231	Ph. Eur., NF, JP
Solubility (Copper tetrammine solution)	passes	passes*	Ph. Eur., USP
pH	5.0 - 7.0	6.5	Ph. Eur., USP
Conductivity	max. 50 µS / cm	16 µS / cm	Ph. Eur., NF, JP
Ether-soluble substances	max. 0.05 %	0.01 %	Ph. Eur., NF, JP
Water-soluble substances	max. 0.24 %	0.11 %	Ph. Eur., NF, JP
Loss on drying	max. 7.0 %	3.3 %	Ph. Eur., USP
Sulphated ash / residue on ignition	max. 0.05 %	< 0.05 %*	Ph. Eur., USP
Heavy metals	max. 10 ppm	< 10 ppm*	T262F (MCW)
Total aerobic microbial count	max. 100 CFU / g	< 100 CFU / g*	Ph. Eur., USP
Fungi / molds and yeasts	max. 20 CFU / g	< 20 CFU / g*	Ph. Eur., USP
E. coli, Pseudomonas aeruginosa	absent in 10 g	absent*	Ph. Eur., USP
Staph. aureus, Salmonella spec.	absent in 10 g	absent*	Ph. Eur., USP
Enterobacteriaceae	absent in 1 g	absent*	Ph. Eur.
Additional characteristics**	Test result**	Reference	
Degree of brightness**	tested min. 89 %**	T220F (MCW)	
Dark particles (Process artifacts)**	tested max. 9 / 600 cm**	T221F (MCW)	
Powder Flow - Angle of repose**	tested max. 45°**	T222F (MCW)	

\* Results reported are expected results based on periodic testing.  
 \*\* Results reported are limited result ranges for the batch for information without claiming a certified status.  
 The batch described by this certificate meets the requirements of Ph. Eur., NF, and JP monographs for "Microcrystalline Cellulose" current editions. It complies with E 460 monograph and all current EU Food Regulations. It is released on the basis of the results associated. The raw materials, manufacturing process, and product do not contain any of the specific listed in Residual Solvents (Ph. Eur., USP, USP<sup>4</sup>872).  
 Storage recommendations: Protect from excessive heat and moisture.  
 Keep containers closed.  
 August 05, 2010  
 Ref.: 0352 / 27734460  
 QC MICROCELLULOSE WEISSENBO

Worldwide Headquarters  
**JRS PHARMA** GmbH & Co. KG  
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**JRS PHARMA LP**  
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LAMPIRAN J

TABEL UJI r

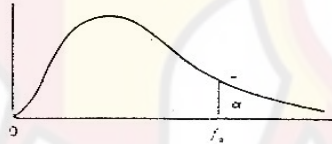
DEGREES OF FREEDOM (DF)	5 PERCENT	1 PERCENT	DEGREES OF FREEDOM (DF)	5 PERCENT	1 PERCENT
1	.997	.1.000	24	.388	.496
2	.950	.990	25	.381	.487
3	.878	.959	26	.374	.478
4	.811	.917	27	.367	.470
5	.754	.874	28	.361	.463
6	.707	.834	29	.355	.456
7	.666	.798	30	.349	.449
8	.632	.765	35	.325	.418
9	.602	.735	40	.304	.393
10	.576	.708	48	.288	.372
11	.553	.684	50	.273	.354
12	.532	.661	60	.250	.325
13	.514	.641	70	.232	.302
14	.497	.623	80	.217	.283
15	.482	.606	90	.205	.267
16	.468	.590	100	.195	.254
17	.456	.575	125	.174	.228
18	.444	.561	150	.159	.208
19	.433	.549	200	.138	.181
20	.423	.537	300	.113	.148
21	.413	.526	400	.098	.128
22	.404	.515	500	.088	.115
23	.396	.505	1000	.062	.081

Dikutip dari: Soedigdo & Soedigdo (1977)

# LAMPIRAN K

## TABEL UJI F

Tabel 7 Nilai kritis distribusi F



$\nu_2$	$\nu_1$								
	1	2	3	4	5	6	7	8	9
1	161.4	199.5	215.7	224.6	230.2	234.0	236.8	238.9	240.5
2	18.51	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.38
3	10.13	9.55	9.23	9.12	9.01	8.94	8.89	8.85	8.81
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02
11	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.90
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54
17	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.49
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46
19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39
21	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42	2.37
22	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.34
23	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37	2.32
24	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.30
25	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34	2.28
26	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.27
27	4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31	2.25
28	4.20	3.34	2.95	2.71	2.56	2.45	2.36	2.29	2.24
29	4.18	3.33	2.93	2.70	2.55	2.43	2.35	2.28	2.22
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21
40	4.08	3.25	2.84	2.61	2.45	2.34	2.25	2.18	2.12
50	4.00	3.15	2.76	2.53	2.37	2.25	2.17	2.10	2.04
100	3.92	3.07	2.68	2.45	2.29	2.17	2.09	2.02	1.96
∞	3.84	3.00	2.60	2.37	2.21	2.10	2.01	1.94	1.88

† Disalin dari Tabel 18 *Biometrika Tables for Statisticians*, Jilid 1 seizin E. S. Pearson dan *Biometrika Trustees*.

**LAMPIRAN L**  
**UJI F KURVA BAKU PENETAPAN KADAR**

**REPLIKASI I**

<b>KONSENTRASI</b>	<b>ABSORBANSI</b>	<b>X<sup>2</sup></b>	<b>Y<sup>2</sup></b>	<b>XY</b>
2,004	0,150	4,0160	0,0225	0,3006
8,016	0,259	64,25625	0,0670	2,0761
14,028	0,374	196,7847	0,1398	5,2464
20,04	0,486	401,6016	0,2361	9,7394
26,052	0,599	678,7067	0,3588	15,6051
32,064	0,710	1028,1001	0,5041	22,7654
38,076	0,823	1449,7818	0,6773	31,3365
		3823,2473	2,0056	87,0695

**REPLIKASI II**

<b>KONSENTRASI</b>	<b>ABSORBANSI</b>	<b>X<sup>2</sup></b>	<b>Y<sup>2</sup></b>	<b>XY</b>
2,004	0,117	4,0160	0,0136	0,2344
8,016	0,239	64,2562	0,0571	1,9158
14,028	0,363	196,7848	0,1317	5,0921
20,040	0,459	401,6016	0,2106	9,1983
26,052	0,579	678,7067	0,3352	15,0841
32,064	0,698	1028,1000	0,4872	22,3806
38,076	0,801	1449,7820	0,6416	30,4988
		3823,2473	1,8770	84,4041

**REPLIKASI III**

<b>KONSENTRASI</b>	<b>ABSORBANSI</b>	<b>X<sup>2</sup></b>	<b>Y<sup>2</sup></b>	<b>XY</b>
2,008	0,132	4,0320	0,0174	0,2650
8,032	0,239	64,5130	0,0571	1,9196
14,056	0,360	197,5710	0,1296	5,0601
20,080	0,465	403,2060	0,2162	9,3372
26,104	0,585	681,4190	0,3422	15,2708
32,128	0,715	1032,2100	0,5112	22,9715
38,152	0,825	1455,5800	0,6806	31,4754
		3838,531	1,9543	86,2996

	<b>S X<sup>2</sup></b>	<b>SXY</b>	<b>S Y<sup>2</sup></b>	<b>N</b>	<b>SSi</b>	<b>RDF</b>
Regresi I	3823,4700	87,0697	2,0058	7	0,0231	6
Regresi II	3823,4700	84,4044	1,8773	7	0,0140	6
Regresi III	3838,5250	86,2998	1,9544	7	0,0142	6
	11485,465	257,7739	5,8376		0,0523	

Ssc = 0,052280307

F = 0,109591007 < F0.05(4,18) 2,93



**LAMPIRAN M**  
**UJI F KURVA BAKU DISOLUSI**

**REPLIKASI I**

<b>KONSENTRASI</b>	<b>ABSORBANSI</b>	<b>X<sup>2</sup></b>	<b>Y<sup>2</sup></b>	<b>XY</b>
10,04	0,400	100,8016	0,1600	4,0160
25,10	0,969	630,0100	0,9389	24,3210
40,16	1,251	1612,8256	1,5650	50,2401
55,22	1,487	3049,2484	2,2111	82,1121
70,28	1,772	4939,2784	3,1399	124,5361
85,34	2,085	7282,9156	4,3472	177,9339
100,4	2,329	10080,1600	5,4242	233,8316
		27695,2396	17,7863	696,9908

**REPLIKASI II**

<b>KONSENTRASI</b>	<b>ABSORBANSI</b>	<b>X<sup>2</sup></b>	<b>Y<sup>2</sup></b>	<b>XY</b>
10,02	0,410	100,4004	0,1681	4,1082
25,05	1,024	627,5025	1,0485	25,6512
40,08	1,310	1606,4060	1,7161	52,5048
55,11	1,580	3037,1120	2,4964	87,0738
70,14	1,871	4919,6200	3,5006	131,2319
85,17	2,193	7253,9290	4,8092	186,7778
100,20	2,469	10040,0400	6,0959	247,3938
		27585,0099	19,8648	734,7415

**REPLIKASI III**

<b>KONSENTRASI</b>	<b>ABSORBANSI</b>	<b>X<sup>2</sup></b>	<b>Y<sup>2</sup></b>	<b>XY</b>
10,02	0,421	100,4004	0,1772	4,2184
25,05	1,002	627,5025	1,0040	25,1001
40,08	1,298	1606,4060	1,6848	52,0238
55,11	1,586	3037,1120	2,5153	87,4044
70,14	1,873	4919,6200	3,5081	131,3722
85,17	2,197	7253,9290	4,8268	187,1185
100,20	2,459	10040,0400	6,0466	246,3918
		27585,0099	19,7628	733,6292

	$S X^2$	$SXY$	$S Y^2$	$N$	$SSi$	<b>RDF</b>
Regresi I	27695.24	696.9918	17.7865	7	0.2457	6
Regresi II	27585.01	734.7415	19.8350	7	0.2647	6
Regresi III	27585.01	733.6629	19.7630	7	0.2502	6
	82865.26	2165.3962	57.3845		0,7996	

$S_{sc} = 0,799542417$

$F = 0,229277841 < F_{0.05}(4,18) 2,93$

**LAMPIRAN N**  
**HASIL UJI ANAVA KEKERASAN TABLET DENGAN *DESIGN-  
 EXPERT***

Use your mouse to right click on individual cells for definitions.

**Response 1 Kekerasan**

**ANOVA for selected factorial model**

**Analysis of variance table [Partial sum of squares - Type III]**

Source	Sum of Squares	df	Mean Square	F Value	p-va Prob	
Model	7.55	3	2.52	200.39	< 0.0001	significant
A-Xanthan gum	1.19	1	1.19	94.81	< 0.0001	
B-Avicel pH 101	6.13	1	6.13	488.50	< 0.0001	
AB	0.22	1	0.22	17.85	0.0029	
Pure Error	0.10	8	0.013			
Cor Total	7.65	11				

The Model F-value of 200.39 implies the model is significant. There is only a 0.01% chance that a "Model F-Value" this large could occur due to noise.

Values of "Prob > F" less than 0.0500 indicate model terms are significant.

In this case A, B, AB are significant model terms.

Values greater than 0.1000 indicate the model terms are not significant.

If there are many insignificant model terms (not counting those required to support hierarchy), model reduction may improve your model.

Std. Dev.	0.11	R-Squared	0.9869
Mean	5.65	Adj R-Squared	0.9819
C.V. %	1.98	Pred R-Squared	0.9705
PRESS	0.23	Adeq Precision	31.839

The "Pred R-Squared" of 0.9705 is in reasonable agreement with the "Adj R-Squared" of 0.9819.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your

ratio of 31.839 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient	df	Standard Error	95%CI		VIF
	Estimate			Low	High	
Intercept	5.65	1	0.032	5.58	5.72	
A-Xanthan gum	-0.32	1	0.032	0.39	-0.24	1.00
B-Avicel pH 101	0.71	1	0.032	0.64	0.79	1.00
AB	0.14	1	0.032	0.062	0.21	1.00

**Final Equation in Terms of Coded Factors:**

$$\begin{aligned} \text{Kekerasan} = & 5.65 \\ & -0.32 * A \\ & 0.71 * B \\ & 0.14 * A * B \end{aligned}$$

**Final Equation in Terms of Actual Factors:**

$$\begin{aligned} \text{Kekerasan} = & 4.59250 \\ & -0.36250 * \text{Xanthan gum} \\ & 0.025500 * \text{Avicel pH 101} \\ & 3.41667\text{E-}003 * \text{Xanthan gum} * \text{Avicel pH 101} \end{aligned}$$

The Diagnostics Case Statistics Report has been moved to the Diagnostics Node.

In the Diagnostics Node, Select Case Statistics from the View Menu.

Proceed to Diagnostic Plots (the next icon in progression). Be sure to look at the:

- 1) Normal probability plot of the studentized residuals to check for normality of residuals.
- 2) Studentized residuals versus predicted values to check for constant error.
- 3) Externally Studentized Residuals to look for outliers, i.e., influential values.
- 4) Box-Cox plot for power transformations.

If all the model statistics and diagnostic plots are OK, finish up with the Model Graphs icon.

**LAMPIRAN O**  
**HASIL UJI ANAVA KERAPUHAN TABLET DENGAN *DESIGN-  
 EXPERT***

Use your mouse to right click on individual cells for definitions.

**Response 2 Kerapuhan**

**ANOVA for selected factorial model**

**Analysis of variance table [Partial sum of squares - Type III]**

Source	Sum of Squares	df	Mean Square	F Value	p-value Prob > F
Model	0.046	3	0.015	10.17	0.0042 significant
<i>A-Xanthan gum</i>	0.033	1	0.033	21.8	0.0016
<i>B-Avicel pH 101</i>	5.208E-003	1	5.208E-003	3.43	0.1010
<i>AB</i>	8.008E-003	1	8.008E-003	5.28	0.0506
Pure Error	0.012	8	1.517E-003		
Cor Total	0.058	11			

The Model F-value of 10.17 implies the model is significant. There is only a 0.42% chance that a "Model F-Value" this large could occur due to noise.

Values of "Prob > F" less than 0.0500 indicate model terms are significant. In this case A are significant model terms.

Values greater than 0.1000 indicate the model terms are not significant.

If there are many insignificant model terms (not counting those required to support hierarchy), model reduction may improve your model.

Std. Dev.	0.039	R-Squared	0.7923
Mean	0.25	Adj R-Squared	0.7144
C.V. %	15.42	Pred R-Squared	0.5327
PRESS	0.027	Adeq Precision	6.968

The "Pred R-Squared" of 0.5327 is in reasonable agreement with the "Adj R-Squared" of 0.7144.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 6.968 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient	Standart df	95%CI Error	95%CI		VIF
	Estimate			Low	High	
Intercept	0.25	1	0.011	0.23	0.28	
A-Xanthan gum	0.52	1	0.011	0.027	0.078	1.00
B-Avicel pH 101	-0.021	1	0.011	-0.047	5.091E-003	1.00
AB	0.026	1	0.011	-9.141E-005	0.052	1.00

**Final Equation in Terms of Coded Factors:**

$$\begin{aligned} \text{Kerapuhan} &= \\ &0.25 \\ &+ 0.052 * A \\ &- 0.021 * B \\ &+ 0.026 * A * B \end{aligned}$$

**Final Equation in Terms of Actual Factors:**

$$\begin{aligned} \text{Kerapuhan} &= \\ &0.35250 \\ &- 0.012500 * \text{Xanthan gum} \\ &- 2.97917E-003 * \text{Avicel pH 101} \\ &+ 6.45833E-004 * \text{Xanthan gum} * \text{Avicel pH 101} \end{aligned}$$

The Diagnostics Case Statistics Report has been moved to the Diagnostics Node.

In the Diagnostics Node, Select Case Statistics from the View Menu.

Proceed to Diagnostic Plots (the next icon in progression). Be sure to look at the:

- 1) Normal probability plot of the studentized residuals to check for normality of residuals.
- 2) Studentized residuals versus predicted values to check for constant error.
- 3) Externally Studentized Residuals to look for outliers, i.e., influential values.
- 4) Box-Cox plot for power transformations.

If all the model statistics and diagnostic plots are OK, finish up with the Model Graphs icon.

**LAMPIRAN P**  
**HASIL UJI ANAVA WAKTU HANCUR TABLET DENGAN**  
**DESIGN-EXPERT**

Use your mouse to right click on individual cells for definitions.

**Response**                      **3**                      **Waktu hancur**

**ANOVA for selected factorial model**

**Analysis of variance table [Partial sum of squares - Type III]**

<b>Source</b>	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F Value</b>	<b>p-value Prob &gt; F</b>
Model	28.67	3	9.56	12.74	0.0020 significant
<i>A-Xanthan gum</i>	0.33	1	0.33	0.44	0.5237
<i>B-Avicel pH 101</i>	27.00	1	27.00	36.00	0.0003
<i>AB</i>	1.33	1	1.33	1.78	0.2191
Pure Error	6.00	8	0.75		
Cor Total	34.67	11			

The Model F-value of 12.74 implies the model is significant. There is only a 0.20% chance that a "Model F-Value" this large could occur due to noise.

Values of "Prob > F" less than 0.0500 indicate model terms are significant. In this case B are significant model terms.

Values greater than 0.1000 indicate the model terms are not significant.

If there are many insignificant model terms (not counting those required to support hierarchy), model reduction may improve your model.

Std. Dev.	0.87	R-Squared	0.8269
Mean	4.33	Adj R-Squared	0.7620
C.V. %	19.99	Pred R-Squared	0.6106
PRESS	13.50	Adeq Precision	7.333

The "Pred R-Squared" of 0.6106 is in reasonable agreement with the "Adj R-Squared" of 0.7620.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 7.333 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient		Standard Error	95% CI		VIF
	Estimate	df		Low	High	
Intercept	4.33	1	0.25	3.76	4.91	
A-Xanthan gum	-0.17	1	0.25	-0.7	40.41	1.00
B-Avicel pH 101	1.50	1	0.25	0.9	22.08	1.00
AB	0.33	1	0.25	-0.2	40.91	1.00

### Final Equation in Terms of Coded Factors:

$$\begin{aligned} \text{Waktu hancur} = & 4.33 \\ & -0.17 * A \\ & 1.50 * B \\ & 0.33 * A * B \end{aligned}$$

### Final Equation in Terms of Actual Factors:

$$\begin{aligned} \text{Waktu hancur} = & 1.58333 \\ & -0.58333 * \text{Xanthan gum} \\ & 0.050000 * \text{Avicel pH 101} \\ & 8.33333\text{E-}003 * \text{Xanthan gum} * \text{Avicel pH 101} \end{aligned}$$

The Diagnostics Case Statistics Report has been moved to the Diagnostics Node.

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Proceed to Diagnostic Plots (the next icon in progression). Be sure to look at the:

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If all the model statistics and diagnostic plots are OK, finish up with the Model Graphs icon.



**LAMPIRAN Q**  
**HASIL UJI ANAVA DISOLUSI TABLET DENGAN *DESIGN-  
 EXPERT***

Use your mouse to right click on individual cells for definitions.

**Response 4 Disolusi**

**ANOVA for selected factorial model**

**Analysis of variance table [Partial sum of squares - Type III]**

<b>Source</b>	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F Value</b>	<b>p-value Prob &gt; F</b>
Model	313.62	3	104.54	25.60	0.0002 significant
<i>A-Xanthan gum</i>	196.99	1	196.99	48.23	0.0001
<i>B-Avicel pH 101</i>	65.71	1	65.71	16.09	0.0039
<i>AB</i>	50.92	1	50.92	12.47	0.0077
Pure Error	32.67	8	4.08		
Cor Total	346.30	11			

The Model F-value of 25.60 implies the model is significant. There is only a 0.02% chance that a "Model F-Value" this large could occur due to noise.

Values of "Prob > F" less than 0.0500 indicate model terms are significant. In this case A, B, AB are significant model terms.

Values greater than 0.1000 indicate the model terms are not significant.

If there are many insignificant model terms (not counting those required to support hierarchy), model reduction may improve your model.

Std. Dev.	2.02	R-Squared	0.9056
Mean	93.69	Adj R-Squared	0.8703
C.V. %	2.16	Pred R-Squared	0.7877
PRESS	73.52	Adeq Precision	10.956

The "Pred R-Squared" of 0.7877 is in reasonable agreement with the "Adj R-Squared" of 0.8703.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 10.956 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient	df	Standard Error	95% CI		VIF
	Estimate			Low	High	
Intercept	93.69	1	0.58	92.34	95.03	
A-Xanthan gum	4.05	1	0.58	2.71	5.40	1.00
B-Avicel pH 101	-2.34	1	0.58	-3.69	0.99	1.00
AB	2.06	1	0.58	0.71	3.41	1.00

**Final Equation in Terms of Coded Factors:**

$$\begin{aligned} \text{Disolusi} &= \\ &93.69 \\ &+ 4.05 * A \\ &- 2.34 * B \\ &+ 2.06 * A * B \end{aligned}$$

**Final Equation in Terms of Actual Factors:**

$$\begin{aligned} \text{Disolusi} &= \\ &103.90083 \\ &- 1.06417 * \text{Xanthan gum} \\ &- 0.27150 * \text{Avicel pH 101} \\ &+ 0.051500 * \text{Xanthan gum} * \text{Avicel pH 101} \end{aligned}$$

The Diagnostics Case Statistics Report has been moved to the Diagnostics Node.

In the Diagnostics Node, Select Case Statistics from the View Menu.

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If all the model statistics and diagnostic plots are OK, finish up with the Model Graphs icon.